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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/706,325

11/12/2003

Jean-Marc Lalancette

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EXAMINER

FIORITO, JAMES

ART UNIT

PAPER NUMBER

1754

MAIL DATE

DELIVERY MODE

05/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/706,325

Applicant(s)

LALANCETTE, JEAN-MARC

Examiner

James A. Fiorito

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 17-19, 22-23, 34, and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming '812 in view of Lowenhaupt '994.

Fleming teaches a method for treating a polymetallic sulfide ore containing gold or silver, and further comprising a base metal selected from the group consisting of iron, aluminum, chromium, titanium, copper, zinc, lead, nickel, cobalt, mercury, tin, and mixtures thereof (Column 1), the method comprising: (a) grinding said polymetallic ore to produce granules (Column 3 Lines 5-6); (b) oxidizing said granules at temperatures of at least about 300 degrees C to produce oxidized granules (Column 2 Lines 53-55); (c) chloride leaching said oxidized granules to produce a pregnant solution of solubilized metal chlorides and a barren solid (Figure 1); (d) recovering said barren solid from said pregnant solution to produce a purified pregnant solution (Figure 1); and (e) selectively recovering gold or silver from said purified pregnant solution yielding a solution essentially deprived of gold or silver (Column 5). Activated Carbon is used to remove the gold and silver from the leach solution (Column 5). The ore is leached with a halide

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salt selected from the group, chloride, iodide and bromide, at a concentration of 0.5 to about 100g/L (Column 2 Lines 5-18).

Fleming does not expressly state that the method is carried out at atmospheric pressure.

Lowenhaupt teaches a method of leaching ore at a pressure from about atmospheric pressure to about 200 psig (Column 2 Lines 20-34). Fleming and Lowenhaupt are analogous art because they are from the same field of endeavor, namely processes of leaching ore.

At the time of invention it would have been obvious to a person of ordinary skill in the to form the process of Fleming to include the method being carried out at atmospheric pressure in view of the teaching of Lowenhaupt. The suggestion or motivation for doing so would have been to provide an operating pressure to the process of Fleming, since Fleming requires pressure leaching, but does not disclose the exact pressure range in which the pressure leaching should occur.

Claims 3, 13, and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming '812 in view of Lowenhaupt '994 as applied to claims 1-2, 4-5, 17-19, 22-23, 34, and 39-43 above, and further in view of Hannaford '373.

Fleming in view of Lowenhaupt does not teach that said oxidizing is performed using lean air.

Hannaford teaches a method oxidizing sulfide ore containing gold, wherein sulfur is converted to SO₂, oxidation occurs at a temperature of 450 to 800 degrees C

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(Column 5-6) in an oxygen-containing atmosphere of at least 1% by volume (Column 5-6). Fleming and Hannaford are analogous art because they are from the same field of endeavor, namely processes of removing gold from ore.

At the time of invention it would have been obvious to perform the oxidizing step using lean air in view of the teaching of Hannaford. The suggestion or motivation for doing so would have been to remove arsenic from the ore (Column 5-6).

Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming '812 in view of Lowenhaupt '994 and Hannaford '373 as applied to claims 1-3, 4-5, 13, 17-19, 22-23, 34-43 above, and further in view of Lalancette WO 98/06878.

Fleming in view of Lowenhaupt and Hannaford does not expressly state that the lean air and sulfur dioxide is directed to a sulfur dioxide scrubbing unit.

Lalancette teaches a process of roasting sulfide-containing ore wherein the sulfur dioxide is directed to a scrubbing unit (Figure 1). Lalancette uses lime to scrub the sulfur dioxide from the gas phase (Figure 1). Fleming, Hannaford and Lalancette are analogous art because they are from the same field of endeavor, namely process of removing gold from ore.

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Fleming in view of Hannaford to include the step of scrubbing the sulfur dioxide in the gas phase in view of the teaching of Lalancette. The suggestion or motivation for doing so would have been to precipitate the sulfur dioxide into the insoluble salt calcium sulfate (Page 9 Line 14-20).

Claims 14-16 and 23-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming '812 in view of Lowenhaupt '994 as applied to claims 1-2, 4-5, 17-19, 22-23, 34, and 39-43 above, and further in view of Lalancette WO 02/053788.

Fleming in view of Lowenhaupt does not expressly state that a brine solution is circulated through an electrolytic cell to separately and concomitantly produce a caustic solution and said brine solution including dissolved halogens, and wherein said brine solution including dissolved halogens is combined with a second portion of said brine solution to produce said leaching solution.

Lalancette teaches a process of recovering gold including a brine solution is circulated through an electrolytic cell to separately and concomitantly produce a caustic solution and said brine solution including dissolved halogens, and wherein said brine solution including dissolved halogens is combined with a second portion of said brine solution to produce said leaching solution (Figure 1). The brine consists of NaCl or KCl at concentrations near saturation, leaching occurs at temperatures between 40-50 degrees C (Page 6). Fleming and Lalancette are analogous art because they are from the same field of endeavor, namely process of removing gold from ore.

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Fleming to include the step of a brine solution is circulated through an electrolytic cell to separately and concomitantly produce a caustic solution and said brine solution including dissolved halogens, and wherein said brine solution including dissolved halogens is combined with a second portion of said brine solution to

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produce said leaching solution and the brine consists of NaCl or KCl at concentrations near saturation, leaching occurs at temperatures between 40-50 degrees C in view of the teaching of Lalancette. The suggestion or motivation for doing so would have been to solubilize different metals according to the appropriate chloride ion strength (Page 4 Lines 9-17).

Claims 6 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming '812 in view of Lowenhaupt '994 as applied to claims 1-2, 4-5, 17-19, 22-23, 34, and 39-43 above, and further in view of Kerfoot '604.

Fleming in view of Lowenhaupt does not expressly state that the solution deprived of gold or silver is treated with a caustic solution to produce a first reaction mixture having a pH ranging from about 2.5 to about 3.5, further producing a precipitate comprising a first set of base metals comprising a hydrated metal oxide selected from the group consisting of iron, aluminum, chromium and titanium, and recovering said precipitate yielding a first solution essentially devoid of iron, aluminum, chromium and titanium.

Kerfoot teaches a ore leaching process wherein iron is precipitated from the leach solution by raising the pH of the solution in the range of 3.5-4.0 (Column 9 Lines 23-35). Fleming and Kerfoot are analogous art because they are from the same field of endeavor, namely process of leaching ore with chlorine.

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Fleming to include that the solution deprived of gold or silver is treated with a caustic solution to produce a first reaction mixture having a pH

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ranging from about 2.5 to about 3.5, further producing a precipitate comprising a first set of base metals comprising a hydrated metal oxide selected from the group consisting of iron, aluminum, chromium and titanium, and recovering said precipitate yielding a first solution essentially devoid of iron, aluminum, chromium and titanium in view of the teaching of Kerfoot. The suggestion or motivation for doing so would have been to remove iron from the leach solution (Column 9 Lines 23-35).

Claims 7 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleming '812 in view of Lowenhaupt '994 and Kerfoot '604 as applied to claims 1-2, 4-6, 17-20, 22-23, 34, and 39-43 above, and further in view of Tuwiner '669.

Fleming in view of Lowenhaupt and Kerfoot does not expressly state the step of treating said first solution with a caustic solution to produce a second reaction mixture having a pH ranging from about 3.5 to about 14, further producing a precipitate including a second set of base metals comprising a hydrated metal oxide selected from the group consisting of nickel, copper, cobalt, zinc, lead and tin, and recovering said precipitate yielding a second solution essentially devoid of nickel, copper, cobalt, zinc, lead and tin.

Tuwiner teaches a process of removing copper and chromium from a gold cyanide leach solution by raising the pH of the solution to the range of 8-9 (Column 6 Lines 55-65 and Column 2 Lines 10-20). Fleming, Kerfoot and Tuwiner are analogous art because they are from the same field of endeavor, namely processes that treat gold leach solutions.

At the time of invention it would have been obvious to a person of ordinary skill in the art to form the process of Fleming in view of Kerfoot to include the step of treating said first solution with a caustic solution to produce a second reaction mixture having a pH ranging from about 3.5 to about 14, further producing a precipitate including a second set of base metals comprising a hydrated metal oxide selected from the group consisting of nickel, copper, cobalt, zinc, lead and tin, and recovering said precipitate yielding a second solution essentially devoid of nickel, copper, cobalt, zinc, lead and tin in view of the teaching of Kerfoot. The suggestion or motivation for doing so would have been to remove copper and chromium from the leach solution (Column 2 Lines 10-20).

Response to Arguments

Applicant's arguments with respect to claims 1-2, 4-5, 17-19, 22-23, 34, and 39-41 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the processes of Fleming and Hannaford are both process of recovering metals from ore.

With respect to the applicants argument that it would not have been obvious to perform the method of Fleming to include that the oxidizing step is performed using lean air. Hannaford teaches that the oxidizing step can be performed in lean air to immobilize arsenic in the ore. In fact, teaches that the ore may be roasted in a gas with a 0.9% oxygen content (Example 8).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fiorito whose telephone number is (571)272-7426. The examiner can normally be reached on 9am - 6pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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